

## REGENERATION OF FERRIC CHLORIDE SOLUTION

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### Abstract

**PURPOSE:** To enhance Ni-removal efficiency by combining the reduction process using metallic iron and the Ni-removal process using iron powder and by grinding treatment of an iron powder slurry used to retain or enhance the activity when ferric chloride etching waste liquor containing a large amount of Ni is to be treated.

**CONSTITUTION:** A nickel-contg. metal plate is etched with a ferric chloride solution and the resultant ferric chloride etching waste liquor containing a large amount of nickel is incorporated with metallic iron to reduce the remaining ferric chloride into ferrous chloride. Thence, the resulting solution thus reduced is incorporated with iron powder to separate nickel out along with grinding treatment of the solid product from the nickel-removal process to retain or enhance the activity of the iron powder, which is reused another nickel-removal process. The nickel separated out is then recovered and the resultant nickel-removed solution is oxidized with an oxidizing agent (e.g., chlorine) to regenerate ferric chloride, which is circulated to the etching process to be reused.

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